



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,345	03/26/2004	Russell Bonaventura	LEAP:135US	1573

7590 06/14/2006

C. Paul Maliszewski, P.E.
Simpson & Simpson, PLLC
5555 Main Street
Williamsville, NY 14221-5406

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
----------	--------------

2872

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,345

Applicant(s)

BONAVENTURA ET AL.

Examiner

Joshua L. Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-34 and 36-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-34 and 36-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Amendment filed May 15, 2006. Claim 4 has been amended and claims 51 and 52 have been added as requested by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-12, 14-24, 26-34, 36-43 and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin (US 5,295,052) in view of Messinger (US 5,076,660).

Regarding claim 4, Chin teaches an air inlet (112); an illumination source (34); a heat sink assembly (80) including a lens (col. 1 lines 40-50) secured to the heat sink assembly and the heat sink arranged to protect the illumination source from direct physical intrusion (Fig. 2) and a plurality of fins (Fig. 5) formed at the heat sink assembly and operatively arranged to conduct heat away from the illumination source and to transfer the heat to air passing by or over the assembly (col. 2 lines 55-60). The illumination source in Chin is protected from direct physical intrusion from all directions from outside the microscope because a person could not stick an

Art Unit: 2872

object into the system in a straight line and contact the illumination source (Fig. 2). Chin lacks specific reference to a microscope. Chin does state that the device is used for medical/surgical applications (abstract). It is extremely well known in the art to use microscopes in combination with light sources for medical/surgical applications. Official Notice is taken. Chin further lacks reference to a baffle directing the airflow. Messenger teaches the heat sink assembly (abstract) comprising a baffle (15, 19 and partitions shown in Fig. 1) located proximate the air inlet (Fig. 1) and operative arranged to deflect air entering via the inlet and to occlude the emanation of light from the source through the air inlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin light source used in combination with a microscope as suggested by Chin for the purpose of allowing surgery to be performed on parts of the body too small to be easily observed with the naked eye. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messenger for the purpose of greater cooling efficiency of the heat sink assembly.

Regarding claim 2, Chin teaches the heat sink further comprises an inner wall (top of 36) and an outer wall (bottom of 36) separated by an air gap (Fig. 5).

Regarding claim 3, Chin teaches a first fin from the plurality of fins is connected to the outer wall and a second fin from the plurality of fins is connected to the inner wall (Fig. 5).

Regarding claims 5, 6, 17, 18, 36 and 37, Chin teaches the invention as claimed including slots to formed in a base plate to allow rapid removal and replacement of components of the device (col. 3 lines 13-20). Chin lacks reference to the use of baffles to direct airflow through the heat sink assembly located in those slots. Messenger teaches the baffle plate overlies the air

Art Unit: 2872

inlet (Fig. 1). Messinger further teaches a first plurality of baffles (Fig. 1). It would be obvious to one of ordinary skill in the art at the time the invention was made to use the slot teaching of Chin to mount the plurality of baffles taught by Messinger for the purpose of using the baffles to direct air across the heat sink for efficient cooling and allow the baffles to be removed to clean off any debris brought into the device by the air inlet.

Regarding claims 7-12, 14, 19-24, 29, 38-43 and 46, Chin teaches the invention as claimed but lacks reference to the use of baffles to direct the airflow. Messinger teaches a baffle having an arcuate shape (15). The element, 15, acts as a baffle directing airflow into the coupling fixture. It would be obvious to have the other baffles (19 and partitions) have the same shape as 15 for the purpose of better directing the airflow. Messinger further teaches each of the baffles forms an opening between an edge of each baffle and the baffle plate disposed in a first direction (Fig. 1). Messinger further teaches the division of the first plurality baffles into two other pluralities of baffles. The second plurality of baffles (15 and 19) has an opening in the first direction and is parallel to the air inlet (9) (Fig. 1). The third plurality of baffles (partitions) has an opening in a second direction opposite the first direction and is perpendicular to the air inlet (9) (Fig. 1). Messinger further teaches an air outlet (13) wherein the heat sink assembly is operatively arranged to induce airflow into the air inlet, across the heat sink, and through the air outlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messinger for the purpose of greater cooling efficiency of the heat sink assembly.

Regarding claims 15, 16, 26, 30 and 47-52, Chin teaches an illumination source (34); a heat sink assembly (80) surrounding the illumination source (Fig. 5) and a plurality of fins (Fig.

Art Unit: 2872

5) formed at the heat sink assembly and operatively arranged to conduct heat away from the illumination source and to transfer the heat to air passing by or over the assembly (col. 2 lines 55-60). Chin lacks specific reference to a microscope. Chin does state that the device is used for medical/surgical applications (abstract). It is extremely well known in the art to use microscopes in combination with light sources for medical/surgical applications. Official Notice is taken. Chin further lacks reference to the use of baffles. Messinger teaches the heat sink assembly (abstract) comprising a fixed baffle (19 and partitions shown in Fig. 1) located proximate the air inlet (Fig. 1) and operative arranged to deflect air entering via the inlet and to occlude the emanation of light from the source through the air inlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messinger for the purpose of greater cooling efficiency of the heat sink assembly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin light source used in combination with a microscope as suggested by Chin for the purpose of allowing surgery to be performed on parts of the body too small to be easily observed with the naked eye.

Regarding claims 27, 31 and 33, Chin teaches the heat sink further comprises an inner wall (top of 36) and an outer wall (bottom of 36) separated by an air gap (Fig. 5).

Regarding claims 28, 32 and 34, Chin teaches a first fin from the plurality of fins is connected to the outer wall and a second fin from the plurality of fins is connected to the inner wall (Fig. 5).

Claims 13, 25, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin (US 5,295,052) in view of Messinger (US 5,076,660) as applied to claims 5, 17 and 36 above, and further in view of Rauhen (US 6,698,200).

Chin in combination with Messinger teaches the invention as claimed including a baseplate (14) with the air inlet disposed in the base plate (Fig. 2) but lacks reference to a thermal insulation layer. Rauhen teaches the use of a thermal insulation layer between the baffles plate (60) and the base plate (Fig. 3). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the thermal insulation layer of Rauhen in the Chin/Messinger invention for the purpose of preventing the heat created by the light source from adversely impacting other components of the microscope outside the heat sink assembly.

Response to Arguments

Applicant's arguments filed May 15, 2006 have been fully considered but they are not persuasive.

Applicant argues that the Chin reference fails to teach or suggest the illumination source protected from direct physical intrusion from all direction from outside the microscope. Applicant points to Fig. 1 of Chin to show that physical intrusion is possible. The examiner interprets the portion of Fig. 1 of Chin showing the illumination source to be a cut away view to show a portion of the interior of the housing. As such a portion of the housing would realistically cover the portion showing the illumination source and thus prevent direction

Art Unit: 2872

physical intrusion from outside the microscope. The examiner's interpretation is supported by Fig. 2 of Chin which shows no break in the exterior housing of the microscope.

Applicant argues Chin teaches against protecting the light source from all directions. The claim language requires that the illumination source be protected from all directions from direction physical intrusion from outside the microscope. As stated above Chin teaches this limitation.

Applicant argues that modifying Chin would change the principle of operation. Chin does not require modification with regards to the direction physical intrusion limitation.

Applicant argues that the baffles of Messinger do not occlude light from inlet 9. Applicant admits that light is occluded from the inlet as a result of the configuration of the passage. As stated in the rejection the partitions in the passage are included as baffles therefore the configuration of the passage that includes the partition occludes light from the inlet as admitted by the applicant.

Applicant argues that the baffles of Messinger are not located proximate to the air inlet. The examiner maintains that within the broadest reasonable interpretation of "proximate" the baffles of Messinger are proximate to the air inlet. If the applicant wishes to more overcome the prior art on these grounds the examiner suggests different language that more specifically defines the positional relationship between the baffle and the air inlet.

Applicant argues Messinger is not analogous to the current invention. Both references deal with using air through baffles to provide a heat sink for an illumination source for a microscope. The examiner considers this to be analogous art.

Applicant argues that modifying Messinger would render the reference inoperable. In the rejection above the Chin reference is modified not the Messinger reference.

Applicant argues that claims 15 and 30 should be allowable for the same reasons as claim 4. Claim 4 is not allowable as discussed above. Further, claims 15 and 30 do not have all the limitations of claim 4 and therefore allowability of claims 15 and 30 is independent of claim 4.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2872


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318.

The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLP 


DREW A. DUNN
SUPERVISORY PATENT EXAMINER